

AMENDMENTS TO THE ABSTRACT:

Please replace the abstract at page 53 of the application to read as follows.

Added text is indicated by underlining, and deleted text is indicated by ~~striketrough~~.

Changes are identified by a vertical bar in the margin.

ABSTRACT OF THE DISCLOSURE

A holographic data storage system having high recording density and compact memory architecture ~~is disclosed.~~ The system includes a laser light source, a spatial light modulator (40) for data input, a ~~beam splitter~~ mirror (50) for separating out part of the parallel laser beams as a reference beam, and a beam steering system (60). Parallel laser beams passing through the spatial light modulator (40) form a two-dimensional signal beam carrying digital data. Unique patterns are then generated from interference of the signal beam and the reference beam, which can be recorded into ~~the~~ a volume holographic medium (10) with unique incident position, angle and cross sectional phase distribution of reference beam.